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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

KROFCHECK, MICHAEL C

ART UNIT	PAPER NUMBER
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2186

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/608,243	<b>Applicant(s)</b> KELLY ET AL.	
	<b>Examiner</b> Michael Krofcheck	<b>Art Unit</b> 2186	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on June 27, 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☒ Claim(s) 21-31 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This office action is in response to application 10/608,243 filed on June 27, 2003.
2. Claims 1 – 31 have been submitted for examination.
3. Claims 1 – 31 have been examined.

#### ***Claim Objections***

4. Claims 21 – 31 are objected to because of the following informalities:
  - a. With respect to claims 21 and 31, both claims are directed to an apparatus for use with a device. However, the device is not defined.
  - b. With respect to claims 27 – 30, the applicant states, “wherein device is a...” in line 1 of each claim. The phrase should be rewritten to say, “wherein the device is a...”
  - c. All other mentioned claims are objected to because of their dependency.Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
6. Claims 1 – 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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7. The term "frequently accessed" in claims 1 – 6, 21, and 31 is a relative term which renders the claim indefinite. The term "frequently accessed" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

8. Claims 7 – 20, and 22 – 30 are rejected based upon their dependency.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 21, 22, 24, 26, 29, and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Kung et al., U.S. Patent Application No. 2004/0078514 (hereinafter Kung).

11. With respect to claim 21, Kung teaches of an apparatus for use with a device, the apparatus comprising: at least one solid-state memory (figs. 1 – 3; item 5; paragraphs 0017, 0018);

at least one spinning media memory (fig. 2; item 13; paragraph 0021); and

a controller configured to transfer frequently accessed data between the spinning media memory and the solid-state memory when the device is not in motion (figs. 1, 2; items 22, 23, 11; paragraphs 0018, 0023 – 0028; where the microcontroller detects the insertion of the flash memory (device) or the USB HID is used if the reader is made a composite USB device (device); therefore it is not in motion. The microcontroller is controlled by the firmware. Upon insertion, the copying of files to the hard drive is undertaken by the device driver, the firmware controlling access in the memory).

12. With respect to claim 22, Kung teaches of all the limitations of the parent claim as discussed supra. Kung also teaches of a motion sensor coupled to provide motion information to the controller from which the controller can determine whether the device is in motion (paragraph 0023 – 0026, 0028; the microcontroller is able to detect the insertion of the flash memory card (device). Since the flash memory card is inserted into the reader it cannot be in motion. The device driver is notified upon insertion of the card to allow the file copying to commence).

13. With respect to claim 24, Kung teaches of all the limitations of the parent claim as discussed supra. Kung also teaches of wherein the device is a vehicle (paragraph 0024; where the reader is a composite USB device).

14. With respect to claim 26, Kung teaches of all the limitations of the parent claim as discussed supra. Kung also teaches of wherein the device is a vehicle (paragraph 0024; where the reader is a composite USB device) and

the apparatus is part of an automatic data collection unit carried by the vehicle (figs. 1, 2; paragraph 0017 – 0018, 0022 – 0028; where the flash memory card, and the

firmware and microcontroller (the controller; both part of the apparatus) are contained in the composite USB device. When inserted, the files on the flash memory are automatically copied to the hard drive. Therefore it is an automatic data collection unit).

15. With respect to claim 29, Kung teaches of all the limitations of the parent claim as discussed supra. Kung also teaches of wherein device is a general purpose computing system including a microprocessor (figs. 1, 2; items 22; paragraph 0024, 0017; wherein the flash memory card and the card reader comprise a composite USB device. The card reader contains a microcontroller), and

the apparatus is coupled to the microprocessor via a bus interface (Figs. 1, 2; paragraph 0017; the flash memory is connected to the microcontroller, and through the USB bus and interface the microcontroller is connected to the host and the hard drive).

16. With respect to claim 31, Kung teaches of an apparatus for use with a device, the apparatus comprising: at least one spinning media memory for storing data (fig. 2; item 13; paragraph 0021);

at least one solid-state memory (figs. 1 – 3; item 5; paragraphs 0017, 0018);

means for determining, from time-to-time, whether the device is in motion (figs. 1, 2; items 22, 23, 11; paragraphs 0018, 0023 – 0028; where the microcontroller detects the insertion of the flash memory or the USB HID is used if the reader is made a composite USB device; therefore it is not in motion); and

means responsive to a determination that the device is not in motion (figs. 1, 2; items 22, 23, 11; paragraphs 0018, 0023 – 0028; where the microcontroller detects the

insertion of the flash memory or the USB HID is used if the reader is made a composite USB device; therefore it is not in motion),

means for transferring frequently accessed data between the spinning media memory and the solid-state memory when the device is determined not to be in motion (figs. 1, 2; items 22, 23, 11; paragraphs 0018, 0023 – 0028; where the microcontroller detects the insertion of the flash memory or the USB HID is used if the reader is made a composite USB device; therefore it is not in motion. Upon insertion the copying of files to the hard drive is undertaken by the device driver across the bus).

### ***Claim Rejections - 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

19. Claim 30 rejected under 35 U.S.C. 103(a) as being unpatentable over Kung and Stobbs et al. U.S. Patent Application Publication No. 2004/0039871 (hereinafter Stobbs).

20. With respect to claim 30, Kung teaches of all the limitations of the parent claim as discussed supra. Kung also teaches of wherein device is a general purpose computing system including a microprocessor (Figs. 1, 2; items 22, 5; paragraph 0024, 0017; wherein the flash memory card and the card reader comprise a composite USB device. The card reader contains a microcontroller, and the flash memory), and

the controller of the apparatus is implemented in the microprocessor of the general-purpose computer (figs. 1, 2; items 22, 23; paragraph 0017, 0018; where the firmware (controller) is within the microprocessor) and

Kung fails to specifically teach of (1) a random access memory and (2) the solid-state memory is implemented in a random access memory of the general purpose computer.

However, Stobbs teaches of a random access memory (fig. 3, item 102; paragraph 0033),

the solid-state memory is implemented in a random access memory of the general purpose computer (figs. 1 – 3, items 100, 102; paragraph 0031 – 0033; where the MRAM (solid-state memory) replaces the flash memory in the computer).

Kung and Stobbs are analogous arts as they are both in the same field of endeavor, memory devices. It would have been obvious to one of ordinary skill in the art having the teachings of Kung and Stobbs at the time of the invention to replace the



flash memory in Kung with a MRAM as taught in Stobbs. The motivation for this would have been to provide the access speed of RAM with the non-volatility of ROM and to extend the life of the memory (Stobbs paragraph 0008 and 0009).

***Allowable Subject Matter***

21. Claims 23, 25, 27, and 28 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

22. Claims 1 – 20 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

23. The following is a statement of reasons for the indication of allowable subject matter:

- a. With respect to claims 1 – 20, specifically independent claim 1, the prior art (Mutoh, U.S. Patent 6,570,726) teaches of a method of operating a device having at least one solid-state memory and at least one spinning media memory for storing data, the method comprising: from time-to-time, determining whether the device is in motion; (figure 4, column 6, line 54 – column 7, line 4) and where the device changes the mode to one where data is allowed to be written into the hard drive when the acceleration is below a threshold (claim 8).

The prior does not teach of transferring frequently accessed data *between the spinning media memory and the solid-state memory in response to determining that the device is not in motion* as claim 1 does.

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- b. With respect to claim 23 the prior art fails to teach of a motion sensor coupled to provide at least one of velocity and acceleration information to the controller from which the controller can determine whether the device is in motion as is taught in the claim.
- c. With respect to claim 25, the prior art fails to teach of where the apparatus is ***incorporated*** (as a whole) into a general-purpose computing system carried by the vehicle as is taught in the claim.
- d. With respect to claim 27, the prior art fails to teach of wherein the apparatus is ***incorporated*** (as a whole) into the user carried automatic data collection unit as is taught in the claim.
- e. With respect to claim 28, the prior art fails to teach of wherein the apparatus is ***incorporated*** (as a whole) into the user carried general purpose computing system as is taught in the claim.

### ***Conclusion***

- 24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
- 25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Krofcheck whose telephone number is 571-272-8193. The examiner can normally be reached on Monday - Friday.

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26. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim can be reached on 571-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

27. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael Krofcheck



**MATTHEW D. ANDERSON**  
**PRIMARY EXAMINER**